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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,400

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Sami Poykko

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32294

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SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER

HUYNH, NAM TRUNG

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,400	Applicant(s) POYKKO ET AL.	
	Examiner NAM HUYNH	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-23 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 3/31/2008. Of the previously presented claims 1, 2, and 4-29; claims 1, 2, 4-6, 11, 18-23, 26, and 27 have been amended and claims 28 and 29 have been added.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 29 pertains to a computer program embodied on a computer readable medium, however, there is no support or evidence in the specification for defining a computer program, as well as a computer readable medium.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4-17, and 24-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kingdon (US 6,477,379).

Regarding claim 1, Kingdon teaches a method of estimating the location of a mobile device, comprising:

collecting location information (Master Positioning Center (MPC) collects Time advance (TA) data);

selecting at least one of a plurality of different location methods (location estimate using TA using three BTSs or two BTSs) to provide a location estimate said methods comprising using cell identity information (TA measurements are made for respective or associated BTSs thus showing that the cell identity information is known to the MPC);

determining a first location estimate based on the at least one selected location method (first measurement including two TA measurements from only two BTSs when this method is selected);

determining a virtual base station estimate (serving sector of BTS) dependent on using at least some of the collected location information (serving base station is identified from collected data); and

providing a second location estimate (TA measurement that includes serving BTS sector) using one of said different location methods based on at least one of the at least one selected first location method estimate and the virtual base station estimate, estimate, said second location estimate being a location of a mobile device (column 6 lines 1-62; column 7, lines 40-50).

Regarding claim 2, Kingdon teaches the at least one location method comprises using cell identity information and using cell identity information and timing advance information (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 4, Kingdon teaches the at least one method further comprises determining the virtual base station estimate using at least one of cell identity information and cell identity information and timing advance information (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 5, Kingdon teaches said virtual base station location estimate is coupled with at least one virtual measurement (estimated coverage area/serving sector) and at least one real measurement (TA measurements of two known BTSs) said at least one virtual measurement being processed using a location method (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 6, Kingdon teaches providing said second location estimate comprises processing said virtual base station location estimate is coupled with at least

one virtual measurement and at least one real measurement (TA measurements taken from two BTSs) said at least one virtual measurement (estimated coverage area/serving sector) being processed using a location method (TA location method), and wherein the at least one real and the at least one virtual measurements are processed using at least one of cell identity information and cell identity information and timing advance information (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 7, Kingdon teaches a value for the virtual measurement is one of measured levels, a combination of measured levels, and an average of measured levels (column 6, lines 1-62; column 7, lines 40-50, timing advance uses a measure of delay to determine distance).

Regarding claim 8, Kingdon teaches at least one location method is selected in dependence on the location information available (column 6, lines 1-62; column 7, lines 40-50, if TA data from three BTSs are available, the MPC uses the data to perform location estimation).

Regarding claim 9, Kingdon teaches said plurality of location estimates are determined and at least one estimate is used to provide said location estimate (column 6, lines 1-62; column 7, lines 40-50, the MPC compares the estimated coverage area/sector information with the two previously taken TA measurements to determine which estimate is within the coverage area).

Regarding claim 10, Kingdon teaches said location information is collected by said mobile device (column 5, lines 62-67; column 6, lines 1-7).

Regarding claims 11-13, Kingdon teaches mobile device is configured to measure a level of at least one type of information (column 5, lines 62-67; column 6, lines 1-7, timing advance information).

Regarding claim 14, Kingdon teaches said mobile device is in a cellular communications device (column 1).

Regarding claim 15, Kingdon teaches said information is collected for a serving cell of the mobile device (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 16, Kingdon teaches said information is collected for at least one neighbouring cell (column 6, lines 1-62; column 7, lines 40-50).

Regarding claim 17, Kingdon teaches selecting the or each cell in respect of which location information is collected (column 5, lines 62-67; column 6, lines 1-7).

Regarding claims 24 and 25, Kingdon teaches the use of timing advance for location estimation. This method is one of a iterative and a closed form method and one of a linear and non linear method.

Regarding claims 27-29, the limitations are rejected as applied to claim 1.

Allowable Subject Matter

5. Claims 18-23 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 2, 4-17, and 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

NTH
7/18/08